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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request ro	or filing a	PROVISIONAL	APPLICAT	ION FOR P	ATENT	unde	r 37 CFR 1.53 (c)	
		Ji	NVENTOR(S	3)				
Given Name (first and midd	dle [if any])	Family Name	or Surname	(City a		Residen	ce Foreign Country)	
Andrew		Silver		Dallas, TX				
Gary Boyd		Stephens		Allen, T				
Out Doyu Anen, 1X								
Additional inventor	rs are bein	g named on the _	separalely	numbered si	heets ett	ached i	herelo	
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Enhanced Service	es/Call	Delivery Usir	ng the GPI	RS/IS-136	Loca	tion		
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OR ·	Турс	Customer Numb	er here	[
Firm or X Individual Name Kenneth W. Bolvin, Northern Telecom								
Address								
Address	P.O. B	ox 832130						
City	Richar	dson	State	TX zır				
Country	US			(972)685			(972)-685-30	30
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The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number. 50-0210								
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PPED OF PRINTED NAME Kenneth W. Bolvin REGISTRATION NO. 34,125								
LEPHONE (972) 685-7096 (if eppropriate) RR2574								

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Application, Assistant Commissioner for Patents, Washington, DC 20231.

ESUBHILL RECEIDE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Silver, Andrew; Stephens, Gary Boyd

Serial No.:Unknown Filed: 07/24/1998

For: Enhanced Services/Call Delivery Using the GPRS/IS-136 Location

Assistant Commissioner for Patents Washington, D.C. 20231

EXPRESS MAIL CERTIFICATE

"Express Mail" label number EF527895880US Date of Deposit 07/24/1998

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or RICHARDSON, USA: Patent Dept., Mail Stop C-0419, RICH1

No.

RR2574 21 Jul 98 NORTEL NORTHERN TELECOM

Attny/Agent

Rec'd.

Invention Title

Enhanced Services/Call Delivery using the GPRS/IS-136 Location

Correspondence will be directed to the first-named inventor only.

Silver Andrew N/A Name usually known as: Andrew Global ID OS23101 Phone 6-445-6334 RICHARD Department Mailstop Cocupation Fax Fax	(1) Full legal nan	ne of first inv	entar (include	e middle ir	nitial)	_,	Residence and post office	address if different	
Andrew Global ID OS23101 Phone G-445-6334 RICHARD 5888 Signature Date Citizen of CANADA City Citizen of CANADA City Citizen of CANADA City Citizen of CANADA City City City City City City City City	Silver				N/A				
Global ID OS23101 Phone 6-445-6334 RICHARD Signature Date Citizen of CANADA C2) Name of supervisor or divisional head Wictor Quintana Same of AVP Reported to: Alastair Westgarth Signature Date Gi Indicate your LOB Wireless Networks If Advanced Technology, please indicate which group. Please Make a Selection Federal organization Are you aware of any imminent future disclosures? Please dat Yes, this idea will be proposed as part of a standards contribut for the GPRS/IS-136 mobile data feature. When? When? When? When? When? When? When? When? O'Y is the Invention relevant to 0 Standards activity? Yes, this idea will be proposed as part of a standards contribut for the GPRS/IS-136 mobile data feature. We will be proposing that this idea be incorporated into GPRS/IS-136 standards in a TR45.2 meeting that will be held July 28th. That is next week!!! (9) Oces this invention area from any auraneoment involving extend organization? Organization Organization	·	known as:					: Dallas, IX /5230		
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Enhanced Services using the GPRS/IS-136 Location. The example that prompted this invention is using the PCCH location (i.e. the location of the mobile in the data network) to provide enhanced prediction of where the mobile will likely appear .) during voice transactions for call delivery. The capability can also be used to provide location based services. Since phones that are in data mode are only known by location in the data network, any location based services will need to be based on I the knowledge of where the mobile is in the data network, even if they are voice based services. The general idea is to use the GPRS location information to provide ANSI-41 location based services. In this case, we are including call delivery in I location based services, because call delivery can take advantage of this information to provide an enhanced call delivery, i providing faster call delivery with less network resources utilized.

TECHNICAL INFORMATION

(b) What is the problem solved by the invention?

If this idea is not utilized, location based services will not function properly when the mobile is in data mode.

(c) What other solutions have been tried and what were their shortcomings?

I am not aware of any other solutions that have been considered/presented to take advantage of the mobile's location in the data network to provide ANSI-41/voice

location based services. Note that the GPRS/IS-136 is the first data standard that this might apply to, but not the only one. The GPRS/IS-136 architecture is currently being developed. Due to the architecture being so new, it is unlikely others have tried to resolve all the implications yet.

d) What are the specific elements or steps that solved the problem. Please provide high level details.

There is a variety of situations here, since the invention is using data based location information in the voice network to provide various location based services including call delivery. We will describe two.

Call Delivery:

For call delivery, when we are going to page the mobile, the SGSN will provide the last known location information to the voice network, which will use the information to setup the call ahead of time to the switch that will probably receive the mobile's page response. This both saves resources and decreases elapsed time before the mobile starts ringing. It can also be used to provide location based terminating services.

Location based SMS:

The current location in the data network will be needed to provide SMS messages that are intended for mobiles in a particular area. For example, if a carrier wants to inform users on the highway that there is a wreck up ahead, the carrier જૂંill need to know which mobiles in the data network are currently on/near that highway.

What is the commercial value of the invention to Nortel and Nortel's major competitors? (see guidelines)

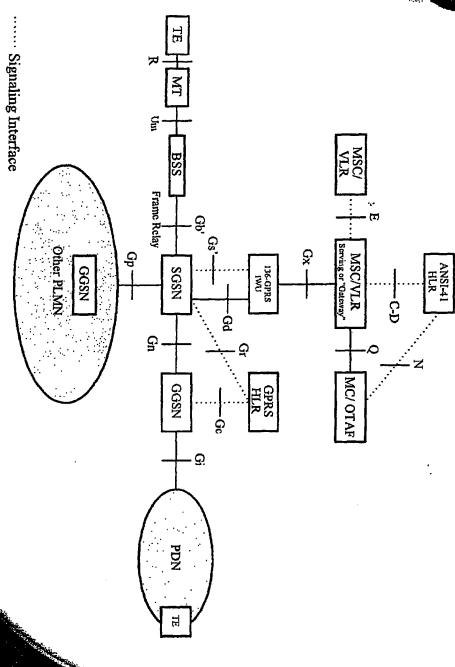
: is clear that there are many situations evolving in the network in which utilizing the current location of the mobile is equired. For many location based services, using that location will be required or the service will not be available for those nobiles. Thus, this capability is of high value for any location based service that the user wishes to receive while in data node.

his invention is also useful to provide enhancements to the network operations, like the reduced elapsed time and saved sources that can be provided during call delivery scenarios. This is particularly important in the new GPRS/IS-136 rchitecture because it is anticpated that the new architecture will otherwise be slower than a standard voice network (for ermination), thus diminishing the attractiveness of the new data offering.

	first inventor (incl	ude middle initia	1)	Residence address (and nos	t office address if different)	
Silver Global ID 05'23101	Andrew	N/A		10661 Steppington DR #10 Dallas, TX 75230		
Phone 6-445-6334	. Location RICHARD	1	nt Mailstop	Occupation PLM	Fax 6-444-3881	
Signature		,Dat	te	Citizen of CANADA		
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Phone 6-444-4650	Location RICHARD	Department 2K60	Mailstop	Occupation Senior Advisor	Fax 6-444-3739	
Signature		Date		Citizen of USA	•	
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Phone	Location	Departm	ient Mailstop	Occupation	Fax	
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Contractor Information				Any other agreement(s) with you	our agency.	
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Non disclosure agreement Please Make a Selection	with Nortel			Please specify		
Exhibit B of the Master Se Please Make a Selection	ervices agreem	ent with yo	nur agency			
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GPRS/136+ Reference Model



- Signaling and Data Transfer Interface

CHARLES DE L'ARTICLE DE

NORTE

Claims

1. A method for providing enhanced services in a wireless communication network using a location of a radiotelephone in the wireless network, the process comprising the steps of:

providing the last known location of the radiotelephone to the wireless network; and

setting up the call in response to the location, the call being set up prior to paging by the radiotelephone.

2. A method for providing enhanced services in a wireless communication network using a location of a radiotelephone in the wireless network, the process comprising the steps of:

providing the last known location of the radiotelephone to the wireless network; and

the wireless network providing selective information to the radiotelephone in response to the location.